



Environment Testing  
TestAmerica

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15



## ANALYTICAL REPORT

Eurofins TestAmerica, St. Louis  
13715 Rider Trail North  
Earth City, MO 63045  
Tel: (314)298-8566

Laboratory Job ID: 160-36638-1

Client Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

For:

Wood E&I Solutions Inc  
10940 White Rock Road Suite 190  
Rancho Cordova, California 95670

Attn: Kent Parrish

Authorized for release by:

1/15/2020 7:28:19 PM

Jayna Awalt, Project Manager II  
(314)298-8566  
[jayna.awalt@testamericainc.com](mailto:jayna.awalt@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?

Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPLAMP Technical Specifications, applicable federal, state, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPLAMP. This Laboratory Report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The signature on the cover page extends to the case narrative and all the data and forms in the package. The Chain of Custody is included and is an integral part of this report.



---

Jayna Awalt  
Project Manager II  
1/15/2020 7:28:19 PM

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

# Table of Contents

Cover Page .....	1
Table of Contents .....	3
Definitions/Glossary .....	4
Case Narrative .....	5
Client Sample Results .....	8
QC Sample Results .....	15
QC Association Summary .....	18
Lab Chronicle .....	22
Certification Summary .....	32
Method Summary .....	33
Sample Summary .....	34
Chain of Custody .....	35
Receipt Checklists .....	38
Internal Chain of Custody .....	39
Prep Data .....	44

# Definitions/Glossary

Client: Wood E&I Solutions Inc  
Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## Qualifiers

Rad Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
D	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Case Narrative

Client: Wood E&I Solutions Inc  
Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

**Job ID: 160-36638-1**

**Laboratory: Eurofins TestAmerica, St. Louis**

Narrative

## CASE NARRATIVE

**Client: Wood E&I Solutions Inc**

**Project: ACMS - Yerington OU-4B\_OU-5\_SOIL**

**Report Number: 160-36638-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Eurofins TestAmerica, St. Louis attests to the validity of the laboratory data generated by Eurofins TestAmerica facilities reported herein. All analyses performed by Eurofins TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Eurofins TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an ""as received"" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Manual Integrations and ROIs were performed only when necessary and are in compliance with the laboratory's standard operating procedure. Detailed information can be found in the raw data section of the level IV report.

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client.

### RECEIPT

The samples were received on 12/10/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.1° C and 0.1° C.

### METALS (ICPMS)

# Case Narrative

Client: Wood E&I Solutions Inc

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## Job ID: 160-36638-1 (Continued)

### Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples STSB05\_0-0.5 (160-36638-1), STSB05\_0.5-3 (160-36638-2), STSB05\_3-6 (160-36638-3), STSB05\_6-15 (160-36638-4), STSB05\_15-25 (160-36638-5), STSB05\_25-35 (160-36638-6), STSB05\_35-45 (160-36638-7), STSB05\_45-55 (160-36638-8), STSB05\_66-71 (160-36638-9), STSB05-FD\_35-45 (160-36638-10), STSB05\_55-61 (160-36638-11), STSB05\_76-81 (160-36638-12), STSB06\_0-0.5 (160-36638-13), STSB06\_0.5-3 (160-36638-14), STSB06\_3-6 (160-36638-15), STSB06-FD\_0.5-3 (160-36638-16), STSB06\_6-15 (160-36638-17), STSB06\_15-25 (160-36638-18), STSB06\_25-35 (160-36638-19), STSB06\_35-45 (160-36638-20), STSB06\_45-51 (160-36638-21), STSB06\_56-61 (160-36638-22), STSB06\_66-71 (160-36638-23) and STSB06-FD\_15-25 (160-36638-24) were analyzed for metals (ICPMS) in accordance with EPA SW-846 Methods 6020A. The samples were prepared on 12/12/2019 and analyzed on 01/01/2020 and 12/31/2019.

For ICPMS Metals, a 2X dilution was performed. This is a standard dilution that is performed by TestAmerica St. Louis on all samples analyzed by method SW-846 6020A. The dilution is performed in order to have the matrix of the samples (i.e. the concentration of acids) match the matrix of the standards used for calibration and instrument quality control purposes. The MDL studies analyzed by this method undergo the same 2X dilution, and all detection limits are based on this. As such, MDL's and RL's are not affected by the dilution.

#### Analytical Batch: 455779

The serial dilution performed was outside control limits for Thorium indicating potential matrix interference: (160-36638-A-21-A SD).

#### Analytical Batch: 455780

The serial dilution performed was outside control limits for Thorium indicating potential matrix interference: (160-36638-A-20-A SD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### PERCENT SOLIDS

Samples STSB05\_0-0.5 (160-36638-1), STSB05\_0.5-3 (160-36638-2), STSB05\_3-6 (160-36638-3), STSB05\_6-15 (160-36638-4), STSB05\_15-25 (160-36638-5), STSB05\_25-35 (160-36638-6), STSB05\_35-45 (160-36638-7), STSB05\_45-55 (160-36638-8), STSB05\_66-71 (160-36638-9), STSB05-FD\_35-45 (160-36638-10), STSB05\_55-61 (160-36638-11), STSB05\_76-81 (160-36638-12), STSB06\_0-0.5 (160-36638-13), STSB06\_0.5-3 (160-36638-14), STSB06\_3-6 (160-36638-15), STSB06-FD\_0.5-3 (160-36638-16), STSB06\_6-15 (160-36638-17), STSB06\_15-25 (160-36638-18), STSB06\_25-35 (160-36638-19), STSB06\_35-45 (160-36638-20), STSB06\_45-51 (160-36638-21), STSB06\_56-61 (160-36638-22), STSB06\_66-71 (160-36638-23) and STSB06-FD\_15-25 (160-36638-24) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 12/11/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples STSB05\_0-0.5 (160-36638-1), STSB05\_0.5-3 (160-36638-2), STSB05\_3-6 (160-36638-3), STSB05\_6-15 (160-36638-4), STSB05\_15-25 (160-36638-5), STSB05\_25-35 (160-36638-6), STSB05\_35-45 (160-36638-7), STSB05\_45-55 (160-36638-8), STSB05\_66-71 (160-36638-9), STSB05-FD\_35-45 (160-36638-10), STSB05\_55-61 (160-36638-11), STSB05\_76-81 (160-36638-12), STSB06\_0-0.5 (160-36638-13), STSB06\_0.5-3 (160-36638-14), STSB06\_3-6 (160-36638-15), STSB06-FD\_0.5-3 (160-36638-16), STSB06\_6-15 (160-36638-17), STSB06\_15-25 (160-36638-18), STSB06\_25-35 (160-36638-19), STSB06\_35-45 (160-36638-20), STSB06\_45-51 (160-36638-21), STSB06\_56-61 (160-36638-22), STSB06\_66-71 (160-36638-23) and STSB06-FD\_15-25 (160-36638-24) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA 901.1. The samples were dried on 12/13/2019, prepared on 12/19/2019 and analyzed on 01/09/2020.

Many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred from Reported to Analyte

Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Pb-212	Po-216
Xe-131m	Xe-131
Sb-125	Te-125m

## Case Narrative

Client: Wood E&I Solutions Inc

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

### Job ID: 160-36638-1 (Continued)

#### Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-211
Th-227	Pb-211
Bi-214	Ra-226

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 160-36638-1

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

## **Client Sample ID: STSB05\_0-0.5**

Date Collected: 12/04/19 12:51

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-1**

Matrix: Solid

Percent Solids: 93.9

### **Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	5.5		0.20	0.088	mg/Kg	⌚	12/12/19 12:37	01/01/20 07:14	2
Uranium	3.2		0.098	0.039	mg/Kg	⌚	12/12/19 12:37	01/01/20 07:14	2

### **Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	2.79		0.339	0.446	1.00	0.208	pCi/g	12/19/19 17:53	01/09/20 10:33	1
Radium-228	1.07		0.254	0.276	1.00	0.311	pCi/g	12/19/19 17:53	01/09/20 10:33	1

## **Client Sample ID: STSB05\_0.5-3**

Date Collected: 12/04/19 12:54

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-2**

Matrix: Solid

Percent Solids: 95.6

### **Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	3.4		0.19	0.085	mg/Kg	⌚	12/12/19 12:37	01/01/20 07:21	2
Uranium	1.1		0.095	0.038	mg/Kg	⌚	12/12/19 12:37	01/01/20 07:21	2

### **Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.92		0.251	0.321	1.00	0.146	pCi/g	12/19/19 17:53	01/09/20 10:34	1
Radium-228	0.922		0.213	0.233	1.00	0.152	pCi/g	12/19/19 17:53	01/09/20 10:34	1

## **Client Sample ID: STSB05\_3-6**

Date Collected: 12/04/19 13:11

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-3**

Matrix: Solid

Percent Solids: 93.6

### **Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	4.3		0.18	0.082	mg/Kg	⌚	12/12/19 12:37	01/01/20 07:27	2
Uranium	1.1		0.091	0.036	mg/Kg	⌚	12/12/19 12:37	01/01/20 07:27	2

### **Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	2.54		0.216	0.341	1.00	0.103	pCi/g	12/19/19 17:53	01/09/20 10:31	1
Radium-228	0.796		0.182	0.199	1.00	0.248	pCi/g	12/19/19 17:53	01/09/20 10:31	1

## **Client Sample ID: STSB05\_6-15**

Date Collected: 12/04/19 14:00

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-4**

Matrix: Solid

Percent Solids: 94.3

### **Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	3.2		0.20	0.091	mg/Kg	⌚	12/12/19 12:37	01/01/20 07:54	2
Uranium	1.1		0.10	0.041	mg/Kg	⌚	12/12/19 12:37	01/01/20 07:54	2

Eurofins TestAmerica, St. Louis

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 160-36638-1

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

**Client Sample ID: STSB05\_6-15**

Date Collected: 12/04/19 14:00

Date Received: 12/10/19 09:00

**Lab Sample ID: 160-36638-4**

Matrix: Solid

Percent Solids: 94.3

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	2.25		0.288	0.368	1.00	0.189	pCi/g	12/19/19 17:53	01/09/20 10:32	1
Radium-228	0.289	U	0.113	0.117	1.00	0.724	pCi/g	12/19/19 17:53	01/09/20 10:32	1

**Client Sample ID: STSB05\_15-25**

Date Collected: 12/04/19 14:08

Date Received: 12/10/19 09:00

**Lab Sample ID: 160-36638-5**

Matrix: Solid

Percent Solids: 86.1

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			Count	Total					
Thorium	9.4		0.21	0.096	mg/Kg	☀	12/12/19 12:37	01/01/20 08:01	2
Uranium	3.6		0.11	0.043	mg/Kg	☀	12/12/19 12:37	01/01/20 08:01	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	2.11		0.322	0.389	1.00	0.321	pCi/g	12/19/19 17:53	01/09/20 10:29	1
Radium-228	1.38		0.312	0.343	1.00	0.237	pCi/g	12/19/19 17:53	01/09/20 10:29	1

**Client Sample ID: STSB05\_25-35**

Date Collected: 12/04/19 14:32

Date Received: 12/10/19 09:00

**Lab Sample ID: 160-36638-6**

Matrix: Solid

Percent Solids: 81.0

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			Count	Total					
Thorium	10		0.21	0.095	mg/Kg	☀	12/12/19 12:37	01/01/20 08:08	2
Uranium	5.1		0.11	0.042	mg/Kg	☀	12/12/19 12:37	01/01/20 08:08	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.88		0.307	0.364	1.00	0.210	pCi/g	12/19/19 17:53	01/09/20 10:30	1
Radium-228	1.42		0.267	0.304	1.00	0.284	pCi/g	12/19/19 17:53	01/09/20 10:30	1

**Client Sample ID: STSB05\_35-45**

Date Collected: 12/04/19 14:43

Date Received: 12/10/19 09:00

**Lab Sample ID: 160-36638-7**

Matrix: Solid

Percent Solids: 88.9

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			Count	Total					
Thorium	8.1		0.22	0.098	mg/Kg	☀	12/12/19 12:37	01/01/20 08:14	2
Uranium	1.5		0.11	0.044	mg/Kg	☀	12/12/19 12:37	01/01/20 08:14	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.08		0.197	0.227	1.00	0.139	pCi/g	12/19/19 17:53	01/09/20 11:10	1
Radium-228	1.19		0.244	0.273	1.00	0.208	pCi/g	12/19/19 17:53	01/09/20 11:10	1

Eurofins TestAmerica, St. Louis

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 160-36638-1

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

**Client Sample ID: STSB05\_45-55**

**Lab Sample ID: 160-36638-8**

Date Collected: 12/04/19 15:10

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 89.5

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	8.9		0.22	0.098	mg/Kg	⌚	12/12/19 12:37	01/01/20 08:21	2
Uranium	1.4		0.11	0.044	mg/Kg	⌚	12/12/19 12:37	01/01/20 08:21	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.29		0.225	0.261	1.00	0.158	pCi/g	12/19/19 17:53	01/09/20 11:11	1
Radium-228	1.32		0.274	0.305	1.00	0.187	pCi/g	12/19/19 17:53	01/09/20 11:11	1

**Client Sample ID: STSB05\_66-71**

**Lab Sample ID: 160-36638-9**

Date Collected: 12/04/19 15:44

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 87.9

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	8.3		0.20	0.091	mg/Kg	⌚	12/12/19 12:37	01/01/20 08:28	2
Uranium	2.3		0.10	0.041	mg/Kg	⌚	12/12/19 12:37	01/01/20 08:28	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.30		0.211	0.251	1.00	0.143	pCi/g	12/19/19 17:53	01/09/20 11:12	1
Radium-228	1.34		0.298	0.328	1.00	0.308	pCi/g	12/19/19 17:53	01/09/20 11:12	1

**Client Sample ID: STSB05-FD\_35-45**

**Lab Sample ID: 160-36638-10**

Date Collected: 12/04/19 14:45

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 90.8

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	6.3		0.21	0.096	mg/Kg	⌚	12/12/19 12:37	01/01/20 08:35	2
Uranium	1.1		0.11	0.042	mg/Kg	⌚	12/12/19 12:37	01/01/20 08:35	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.08		0.221	0.247	1.00	0.175	pCi/g	12/19/19 17:53	01/09/20 11:13	1
Radium-228	1.04		0.313	0.330	1.00	0.366	pCi/g	12/19/19 17:53	01/09/20 11:13	1

**Client Sample ID: STSB05\_55-61**

**Lab Sample ID: 160-36638-11**

Date Collected: 12/04/19 15:30

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 82.9

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	7.1		0.22	0.10	mg/Kg	⌚	12/12/19 12:37	01/01/20 08:41	2
Uranium	0.99		0.11	0.044	mg/Kg	⌚	12/12/19 12:37	01/01/20 08:41	2

Eurofins TestAmerica, St. Louis

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 160-36638-1

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

**Client Sample ID: STSB05\_55-61**

**Lab Sample ID: 160-36638-11**

Date Collected: 12/04/19 15:30

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 82.9

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.41		0.330	0.361	1.00	0.287	pCi/g	12/19/19 17:53	01/09/20 11:14	1
Radium-228	1.65		0.358	0.395	1.00	0.225	pCi/g	12/19/19 17:53	01/09/20 11:14	1

**Client Sample ID: STSB05\_76-81**

**Lab Sample ID: 160-36638-12**

Date Collected: 12/04/19 16:00

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 87.2

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			Count	Total					
Thorium	5.9		0.22	0.099	mg/Kg	☀	12/12/19 12:37	01/01/20 08:48	2
Uranium	0.93		0.11	0.044	mg/Kg	☀	12/12/19 12:37	01/01/20 08:48	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.55		0.256	0.302	1.00	0.162	pCi/g	12/19/19 17:53	01/09/20 11:15	1
Radium-228	1.35		0.268	0.302	1.00	0.126	pCi/g	12/19/19 17:53	01/09/20 11:15	1

**Client Sample ID: STSB06\_0-0.5**

**Lab Sample ID: 160-36638-13**

Date Collected: 12/05/19 10:54

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 93.1

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			Count	Total					
Thorium	4.6		0.20	0.088	mg/Kg	☀	12/12/19 12:37	01/01/20 08:55	2
Uranium	1.2		0.098	0.039	mg/Kg	☀	12/12/19 12:37	01/01/20 08:55	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.60		0.205	0.264	1.00	0.138	pCi/g	12/19/19 17:53	01/09/20 11:51	1
Radium-228	0.846		0.216	0.232	1.00	0.171	pCi/g	12/19/19 17:53	01/09/20 11:51	1

**Client Sample ID: STSB06\_0.5-3**

**Lab Sample ID: 160-36638-14**

Date Collected: 12/05/19 10:57

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 96.2

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			Count	Total					
Thorium	6.4		0.18	0.081	mg/Kg	☀	12/12/19 12:37	01/01/20 09:22	2
Uranium	1.2		0.090	0.036	mg/Kg	☀	12/12/19 12:37	01/01/20 09:22	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.31		0.216	0.254	1.00	0.135	pCi/g	12/19/19 17:53	01/09/20 11:51	1
Radium-228	1.19		0.212	0.245	1.00	0.202	pCi/g	12/19/19 17:53	01/09/20 11:51	1

Eurofins TestAmerica, St. Louis

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 160-36638-1

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

**Client Sample ID: STSB06\_3-6**

**Lab Sample ID: 160-36638-15**

Date Collected: 12/05/19 11:10

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 95.9

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	7.0		0.20	0.088	mg/Kg	⌚	12/12/19 12:37	01/01/20 09:29	2
Uranium	1.2		0.098	0.039	mg/Kg	⌚	12/12/19 12:37	01/01/20 09:29	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	0.935		0.180	0.205	1.00	0.141	pCi/g	12/19/19 17:53	01/09/20 11:52	1
Radium-228	0.784		0.223	0.237	1.00	0.243	pCi/g	12/19/19 17:53	01/09/20 11:52	1

**Client Sample ID: STSB06-FD\_0.5-3**

**Lab Sample ID: 160-36638-16**

Date Collected: 12/05/19 10:59

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 96.2

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	6.7		0.20	0.091	mg/Kg	⌚	12/12/19 12:37	01/01/20 09:35	2
Uranium	1.4		0.10	0.040	mg/Kg	⌚	12/12/19 12:37	01/01/20 09:35	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.07		0.214	0.241	1.00	0.168	pCi/g	12/19/19 17:53	01/09/20 11:53	1
Radium-228	1.03		0.254	0.275	1.00	0.245	pCi/g	12/19/19 17:53	01/09/20 11:53	1

**Client Sample ID: STSB06\_6-15**

**Lab Sample ID: 160-36638-17**

Date Collected: 12/05/19 11:18

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 95.1

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	6.7		0.18	0.083	mg/Kg	⌚	12/12/19 12:37	01/01/20 09:42	2
Uranium	1.9		0.092	0.037	mg/Kg	⌚	12/12/19 12:37	01/01/20 09:42	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.18		0.247	0.276	1.00	0.215	pCi/g	12/19/19 17:53	01/09/20 11:54	1
Radium-228	0.952		0.304	0.319	1.00	0.523	pCi/g	12/19/19 17:53	01/09/20 11:54	1

**Client Sample ID: STSB06\_15-25**

**Lab Sample ID: 160-36638-18**

Date Collected: 12/05/19 11:24

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 95.8

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	5.1		0.18	0.083	mg/Kg	⌚	12/12/19 12:37	01/01/20 09:49	2
Uranium	1.7		0.092	0.037	mg/Kg	⌚	12/12/19 12:37	01/01/20 09:49	2

Eurofins TestAmerica, St. Louis

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 160-36638-1

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

**Client Sample ID: STSB06\_15-25**

**Lab Sample ID: 160-36638-18**

Date Collected: 12/05/19 11:24

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 95.8

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.22		0.202	0.239	1.00	0.124	pCi/g	12/19/19 17:53	01/09/20 11:56	1
Radium-228	0.622		0.287	0.294	1.00	0.270	pCi/g	12/19/19 17:53	01/09/20 11:56	1

**Client Sample ID: STSB06\_25-35**

**Lab Sample ID: 160-36638-19**

Date Collected: 12/05/19 11:33

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 94.0

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			Count	Total					
Thorium	5.5		0.19	0.085	mg/Kg	☀	12/12/19 12:37	01/01/20 09:56	2
Uranium	1.2		0.094	0.038	mg/Kg	☀	12/12/19 12:37	01/01/20 09:56	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	0.897		0.163	0.188	1.00	0.121	pCi/g	12/19/19 17:53	01/09/20 12:32	1
Radium-228	0.771		0.203	0.218	1.00	0.338	pCi/g	12/19/19 17:53	01/09/20 12:32	1

**Client Sample ID: STSB06\_35-45**

**Lab Sample ID: 160-36638-20**

Date Collected: 12/05/19 11:53

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 93.2

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			Count	Total					
Thorium	5.8		0.20	0.088	mg/Kg	☀	12/12/19 12:37	01/01/20 10:02	2
Uranium	1.2		0.098	0.039	mg/Kg	☀	12/12/19 12:37	01/01/20 10:02	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	0.926		0.216	0.236	1.00	0.196	pCi/g	12/19/19 17:53	01/09/20 12:32	1
Radium-228	1.24		0.241	0.271	1.00	0.347	pCi/g	12/19/19 17:53	01/09/20 12:32	1

**Client Sample ID: STSB06\_45-51**

**Lab Sample ID: 160-36638-21**

Date Collected: 12/05/19 12:22

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 91.1

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			Count	Total					
Thorium	7.0		0.20	0.090	mg/Kg	☀	12/12/19 12:39	12/31/19 22:08	2
Uranium	1.1		0.10	0.040	mg/Kg	☀	12/12/19 12:39	12/31/19 22:08	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	0.992		0.248	0.268	1.00	0.227	pCi/g	12/19/19 19:25	01/09/20 06:39	1
Radium-228	0.906		0.306	0.320	1.00	0.520	pCi/g	12/19/19 19:25	01/09/20 06:39	1

Eurofins TestAmerica, St. Louis

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 160-36638-1

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

**Client Sample ID: STSB06\_56-61**

**Lab Sample ID: 160-36638-22**

Date Collected: 12/05/19 12:34

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 92.0

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	9.0		0.20	0.090	mg/Kg	⌚	12/12/19 12:39	12/31/19 22:35	2
Uranium	1.6		0.10	0.040	mg/Kg	⌚	12/12/19 12:39	12/31/19 22:35	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.36		0.271	0.306	1.00	0.197	pCi/g	12/19/19 19:25	01/09/20 06:40	1
Radium-228	1.46		0.276	0.314	1.00	0.306	pCi/g	12/19/19 19:25	01/09/20 06:40	1

**Client Sample ID: STSB06\_66-71**

**Lab Sample ID: 160-36638-23**

Date Collected: 12/05/19 12:52

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 87.7

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	2.9		0.21	0.094	mg/Kg	⌚	12/12/19 12:39	12/31/19 23:02	2
Uranium	0.73		0.10	0.042	mg/Kg	⌚	12/12/19 12:39	12/31/19 23:02	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.04		0.236	0.259	1.00	0.197	pCi/g	12/19/19 19:25	01/09/20 06:41	1
Radium-228	1.23		0.240	0.270	1.00	0.100	pCi/g	12/19/19 19:25	01/09/20 06:41	1

**Client Sample ID: STSB06-FD\_15-25**

**Lab Sample ID: 160-36638-24**

Date Collected: 12/05/19 11:26

Matrix: Solid

Date Received: 12/10/19 09:00

Percent Solids: 96.0

**Method: 6020A - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	6.1		0.20	0.090	mg/Kg	⌚	12/12/19 12:39	12/31/19 23:09	2
Uranium	1.8		0.10	0.040	mg/Kg	⌚	12/12/19 12:39	12/31/19 23:09	2

**Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)**

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	1.29		0.274	0.305	1.00	0.224	pCi/g	12/19/19 19:25	01/09/20 07:18	1
Radium-228	1.27		0.425	0.445	1.00	0.362	pCi/g	12/19/19 19:25	01/09/20 07:18	1

Eurofins TestAmerica, St. Louis

# QC Sample Results

Client: Wood E&I Solutions Inc

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 160-454089/1-A**

**Matrix: Solid**

**Analysis Batch: 455780**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 454089**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	ND		0.20	0.088	mg/Kg		12/12/19 12:37	01/01/20 06:54	2
Uranium	ND		0.098	0.039	mg/Kg		12/12/19 12:37	01/01/20 06:54	2

**Lab Sample ID: LCS 160-454089/2-A**

**Matrix: Solid**

**Analysis Batch: 455780**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 454089**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Thorium	92.6	90.2		mg/Kg		97	80 - 120

**Lab Sample ID: LCSSRM 160-454089/3-A**

**Matrix: Solid**

**Analysis Batch: 455780**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 454089**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec.	Limits
Uranium	98.1	92.6		mg/Kg		94.4	74.0 - 126.

**Lab Sample ID: 160-36638-20 MS**

**Matrix: Solid**

**Analysis Batch: 455780**

**Client Sample ID: STSB06\_35-45**

**Prep Type: Total/NA**

**Prep Batch: 454089**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Thorium	5.8		103	111		mg/Kg	⊗	102	75 - 125
Uranium	1.2		103	105		mg/Kg	⊗	101	75 - 125

**Lab Sample ID: 160-36638-20 MSD**

**Matrix: Solid**

**Analysis Batch: 455780**

**Client Sample ID: STSB06\_35-45**

**Prep Type: Total/NA**

**Prep Batch: 454089**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD	Limit
Thorium	5.8		101	107		mg/Kg	⊗	100	75 - 125	4	30
Uranium	1.2		101	103		mg/Kg	⊗	101	75 - 125	2	30

**Lab Sample ID: MB 160-454090/1-A**

**Matrix: Solid**

**Analysis Batch: 455779**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 454090**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	ND		0.19	0.083	mg/Kg		12/12/19 12:39	12/31/19 21:48	2
Uranium	ND		0.093	0.037	mg/Kg		12/12/19 12:39	12/31/19 21:48	2

**Lab Sample ID: LCS 160-454090/2-A**

**Matrix: Solid**

**Analysis Batch: 455779**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 454090**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Thorium	96.5	95.0		mg/Kg		98	80 - 120

Eurofins TestAmerica, St. Louis

# QC Sample Results

Client: Wood E&I Solutions Inc

Job ID: 160-36638-1

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSSRM 160-454090/3-A**

**Matrix: Solid**

**Analysis Batch: 455779**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 454090**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec.
Uranium	98.1	93.4		mg/Kg	95.2	74.0 - 126.	4

**Lab Sample ID: 160-36638-21 MS**

**Matrix: Solid**

**Analysis Batch: 455779**

**Client Sample ID: STSB06\_45-51**

**Prep Type: Total/NA**

**Prep Batch: 454090**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
Thorium	7.0		103	109		mg/Kg	⊗	99	75 - 125
Uranium	1.1		103	104		mg/Kg	⊗	100	75 - 125

**Lab Sample ID: 160-36638-21 MSD**

**Matrix: Solid**

**Analysis Batch: 455779**

**Client Sample ID: STSB06\_45-51**

**Prep Type: Total/NA**

**Prep Batch: 454090**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.	RPD
Thorium	7.0		106	116		mg/Kg	⊗	104	75 - 125	7
Uranium	1.1		106	111		mg/Kg	⊗	104	75 - 125	7

## Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

**Lab Sample ID: MB 160-454800/1-A**

**Matrix: Solid**

**Analysis Batch: 456218**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 454800**

Analyte	MB Result	MB Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.1209	U	0.165	0.166	1.00	0.446	pCi/g	12/19/19 17:53	01/09/20 09:48	1
Radium-228	0.002587	U	0.0180	0.0180	1.00	0.408	pCi/g	12/19/19 17:53	01/09/20 09:48	1

**Lab Sample ID: LCS 160-454800/2-A**

**Matrix: Solid**

**Analysis Batch: 456219**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 454800**

Analyte	Spike Added	Spke	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec.
		Added	Result	Qual	Uncert. (2σ+/-)					
Americium-241	96.6	86.09			9.07		1.54	pCi/g	89	75 - 125
Cesium-137	27.3	26.97			2.90		0.236	pCi/g	99	75 - 125
Cobalt-60	10.7	10.85			1.16		0.105	pCi/g	101	75 - 125

**Lab Sample ID: 160-36638-20 DU**

**Matrix: Solid**

**Analysis Batch: 456214**

**Client Sample ID: STSB06\_35-45**

**Prep Type: Total/NA**

**Prep Batch: 454800**

Analyte	Sample Result	Sample Qual	DU	DU	Total	RL	MDC	Unit	DER	Limit
			Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.926		0.9295		0.202	1.00	0.136	pCi/g	0.02	2
Radium-228	1.24		1.073		0.240	1.00	0.0969	pCi/g	0.91	2

Eurofins TestAmerica, St. Louis

# QC Sample Results

Client: Wood E&I Solutions Inc

Job ID: 160-36638-1

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

## Method: 901.1 - Radium-226 & Other Gamma Emitters (GS) (Continued)

**Lab Sample ID: MB 160-454803/1-A**

**Matrix: Solid**

**Analysis Batch: 456216**

Analyte	Result	MB Result	MB Qualifier	Count		Total		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
				Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	Uncert. (2σ+/-)	Total Uncert. (2σ+/-)						
Radium-226	0.1872			0.103	0.105	1.00	0.127	pCi/g	12/19/19 19:25	01/09/20 06:35	1		
Radium-228	-0.1959	U		0.134	0.136	1.00	0.469	pCi/g	12/19/19 19:25	01/09/20 06:35	1		

**Lab Sample ID: LCS 160-454803/2-A**

**Matrix: Solid**

**Analysis Batch: 456217**

Analyte	Spike Added	LCS Result	LCS Qual	Total		RL	MDC	Unit	%Rec	Limits	%Rec	Limits
				Uncert. (2σ+/-)	Total Uncert. (2σ+/-)							
Americium-241	96.6	92.40		9.74			1.30	pCi/g	96	75 - 125		
Cesium-137	27.3	27.19		2.91			0.273	pCi/g	100	75 - 125		
Cobalt-60	10.7	10.65		1.12			0.122	pCi/g	100	75 - 125		

**Lab Sample ID: 160-36699-A-2-B DU**

**Matrix: Solid**

**Analysis Batch: 456217**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total		RL	MDC	Unit	DER	Limit
					Uncert. (2σ+/-)	Total Uncert. (2σ+/-)					
Radium-226	1.33		1.397		0.253		1.00	0.147	pCi/g	0.37	2
Radium-228	0.837		0.8707		0.197		1.00	0.191	pCi/g	0.22	2

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 454803**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 454803**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 454803**

# QC Association Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## Metals

### Prep Batch: 454089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-36638-1	STSB05_0-0.5	Total/NA	Solid	3050B	1
160-36638-2	STSB05_0.5-3	Total/NA	Solid	3050B	2
160-36638-3	STSB05_3-6	Total/NA	Solid	3050B	3
160-36638-4	STSB05_6-15	Total/NA	Solid	3050B	4
160-36638-5	STSB05_15-25	Total/NA	Solid	3050B	5
160-36638-6	STSB05_25-35	Total/NA	Solid	3050B	6
160-36638-7	STSB05_35-45	Total/NA	Solid	3050B	7
160-36638-8	STSB05_45-55	Total/NA	Solid	3050B	8
160-36638-9	STSB05_66-71	Total/NA	Solid	3050B	9
160-36638-10	STSB05-FD_35-45	Total/NA	Solid	3050B	10
160-36638-11	STSB05_55-61	Total/NA	Solid	3050B	11
160-36638-12	STSB05_76-81	Total/NA	Solid	3050B	12
160-36638-13	STSB06_0-0.5	Total/NA	Solid	3050B	13
160-36638-14	STSB06_0.5-3	Total/NA	Solid	3050B	14
160-36638-15	STSB06_3-6	Total/NA	Solid	3050B	15
160-36638-16	STSB06-FD_0.5-3	Total/NA	Solid	3050B	
160-36638-17	STSB06_6-15	Total/NA	Solid	3050B	
160-36638-18	STSB06_15-25	Total/NA	Solid	3050B	
160-36638-19	STSB06_25-35	Total/NA	Solid	3050B	
160-36638-20	STSB06_35-45	Total/NA	Solid	3050B	
MB 160-454089/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 160-454089/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSSRM 160-454089/3-A	Lab Control Sample	Total/NA	Solid	3050B	
160-36638-20 MS	STSB06_35-45	Total/NA	Solid	3050B	
160-36638-20 MSD	STSB06_35-45	Total/NA	Solid	3050B	

### Prep Batch: 454090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-36638-21	STSB06_45-51	Total/NA	Solid	3050B	1
160-36638-22	STSB06_56-61	Total/NA	Solid	3050B	2
160-36638-23	STSB06_66-71	Total/NA	Solid	3050B	3
160-36638-24	STSB06-FD_15-25	Total/NA	Solid	3050B	4
MB 160-454090/1-A	Method Blank	Total/NA	Solid	3050B	5
LCS 160-454090/2-A	Lab Control Sample	Total/NA	Solid	3050B	6
LCSSRM 160-454090/3-A	Lab Control Sample	Total/NA	Solid	3050B	7
160-36638-21 MS	STSB06_45-51	Total/NA	Solid	3050B	8
160-36638-21 MSD	STSB06_45-51	Total/NA	Solid	3050B	9

### Analysis Batch: 455779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-36638-21	STSB06_45-51	Total/NA	Solid	6020A	454090
160-36638-22	STSB06_56-61	Total/NA	Solid	6020A	454090
160-36638-23	STSB06_66-71	Total/NA	Solid	6020A	454090
160-36638-24	STSB06-FD_15-25	Total/NA	Solid	6020A	454090
MB 160-454090/1-A	Method Blank	Total/NA	Solid	6020A	454090
LCS 160-454090/2-A	Lab Control Sample	Total/NA	Solid	6020A	454090
LCSSRM 160-454090/3-A	Lab Control Sample	Total/NA	Solid	6020A	454090
160-36638-21 MS	STSB06_45-51	Total/NA	Solid	6020A	454090
160-36638-21 MSD	STSB06_45-51	Total/NA	Solid	6020A	454090

Eurofins TestAmerica, St. Louis

# QC Association Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## Metals

### Analysis Batch: 455780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-36638-1	STSB05_0-0.5	Total/NA	Solid	6020A	454089
160-36638-2	STSB05_0.5-3	Total/NA	Solid	6020A	454089
160-36638-3	STSB05_3-6	Total/NA	Solid	6020A	454089
160-36638-4	STSB05_6-15	Total/NA	Solid	6020A	454089
160-36638-5	STSB05_15-25	Total/NA	Solid	6020A	454089
160-36638-6	STSB05_25-35	Total/NA	Solid	6020A	454089
160-36638-7	STSB05_35-45	Total/NA	Solid	6020A	454089
160-36638-8	STSB05_45-55	Total/NA	Solid	6020A	454089
160-36638-9	STSB05_66-71	Total/NA	Solid	6020A	454089
160-36638-10	STSB05-FD_35-45	Total/NA	Solid	6020A	454089
160-36638-11	STSB05_55-61	Total/NA	Solid	6020A	454089
160-36638-12	STSB05_76-81	Total/NA	Solid	6020A	454089
160-36638-13	STSB06_0-0.5	Total/NA	Solid	6020A	454089
160-36638-14	STSB06_0.5-3	Total/NA	Solid	6020A	454089
160-36638-15	STSB06_3-6	Total/NA	Solid	6020A	454089
160-36638-16	STSB06-FD_0.5-3	Total/NA	Solid	6020A	454089
160-36638-17	STSB06_6-15	Total/NA	Solid	6020A	454089
160-36638-18	STSB06_15-25	Total/NA	Solid	6020A	454089
160-36638-19	STSB06_25-35	Total/NA	Solid	6020A	454089
160-36638-20	STSB06_35-45	Total/NA	Solid	6020A	454089
MB 160-454089/1-A	Method Blank	Total/NA	Solid	6020A	454089
LCS 160-454089/2-A	Lab Control Sample	Total/NA	Solid	6020A	454089
LCSSRM 160-454089/3-A	Lab Control Sample	Total/NA	Solid	6020A	454089
160-36638-20 MS	STSB06_35-45	Total/NA	Solid	6020A	454089
160-36638-20 MSD	STSB06_35-45	Total/NA	Solid	6020A	454089

## General Chemistry

### Analysis Batch: 453925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-36638-1	STSB05_0-0.5	Total/NA	Solid	Moisture	
160-36638-2	STSB05_0.5-3	Total/NA	Solid	Moisture	
160-36638-3	STSB05_3-6	Total/NA	Solid	Moisture	
160-36638-4	STSB05_6-15	Total/NA	Solid	Moisture	
160-36638-5	STSB05_15-25	Total/NA	Solid	Moisture	
160-36638-6	STSB05_25-35	Total/NA	Solid	Moisture	
160-36638-7	STSB05_35-45	Total/NA	Solid	Moisture	
160-36638-8	STSB05_45-55	Total/NA	Solid	Moisture	
160-36638-9	STSB05_66-71	Total/NA	Solid	Moisture	
160-36638-10	STSB05-FD_35-45	Total/NA	Solid	Moisture	
160-36638-11	STSB05_55-61	Total/NA	Solid	Moisture	
160-36638-12	STSB05_76-81	Total/NA	Solid	Moisture	
160-36638-13	STSB06_0-0.5	Total/NA	Solid	Moisture	
160-36638-14	STSB06_0.5-3	Total/NA	Solid	Moisture	
160-36638-15	STSB06_3-6	Total/NA	Solid	Moisture	
160-36638-16	STSB06-FD_0.5-3	Total/NA	Solid	Moisture	
160-36638-17	STSB06_6-15	Total/NA	Solid	Moisture	
160-36636-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

Eurofins TestAmerica, St. Louis

# QC Association Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## General Chemistry

### Analysis Batch: 453936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-36638-18	STSB06_15-25	Total/NA	Solid	Moisture	
160-36638-19	STSB06_25-35	Total/NA	Solid	Moisture	
160-36638-20	STSB06_35-45	Total/NA	Solid	Moisture	
160-36638-21	STSB06_45-51	Total/NA	Solid	Moisture	
160-36638-22	STSB06_56-61	Total/NA	Solid	Moisture	
160-36638-23	STSB06_66-71	Total/NA	Solid	Moisture	
160-36638-24	STSB06-FD_15-25	Total/NA	Solid	Moisture	
160-36638-18 DU	STSB06_15-25	Total/NA	Solid	Moisture	

## Rad

### Leach Batch: 454242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-36638-1	STSB05_0-0.5	Total/NA	Solid	Dry and Grind	
160-36638-2	STSB05_0.5-3	Total/NA	Solid	Dry and Grind	
160-36638-3	STSB05_3-6	Total/NA	Solid	Dry and Grind	
160-36638-4	STSB05_6-15	Total/NA	Solid	Dry and Grind	
160-36638-5	STSB05_15-25	Total/NA	Solid	Dry and Grind	
160-36638-6	STSB05_25-35	Total/NA	Solid	Dry and Grind	
160-36638-7	STSB05_35-45	Total/NA	Solid	Dry and Grind	
160-36638-8	STSB05_45-55	Total/NA	Solid	Dry and Grind	
160-36638-9	STSB05_66-71	Total/NA	Solid	Dry and Grind	
160-36638-10	STSB05-FD_35-45	Total/NA	Solid	Dry and Grind	
160-36638-11	STSB05_55-61	Total/NA	Solid	Dry and Grind	
160-36638-12	STSB05_76-81	Total/NA	Solid	Dry and Grind	
160-36638-13	STSB06_0-0.5	Total/NA	Solid	Dry and Grind	
160-36638-14	STSB06_0.5-3	Total/NA	Solid	Dry and Grind	
160-36638-15	STSB06_3-6	Total/NA	Solid	Dry and Grind	
160-36638-16	STSB06-FD_0.5-3	Total/NA	Solid	Dry and Grind	
160-36638-17	STSB06_6-15	Total/NA	Solid	Dry and Grind	
160-36638-18	STSB06_15-25	Total/NA	Solid	Dry and Grind	
160-36638-19	STSB06_25-35	Total/NA	Solid	Dry and Grind	
160-36638-20	STSB06_35-45	Total/NA	Solid	Dry and Grind	
160-36638-21	STSB06_45-51	Total/NA	Solid	Dry and Grind	
160-36638-22	STSB06_56-61	Total/NA	Solid	Dry and Grind	
160-36638-23	STSB06_66-71	Total/NA	Solid	Dry and Grind	
160-36638-24	STSB06-FD_15-25	Total/NA	Solid	Dry and Grind	
160-36638-20 DU	STSB06_35-45	Total/NA	Solid	Dry and Grind	

### Leach Batch: 454434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-36699-A-2-B DU	Duplicate	Total/NA	Solid	Dry and Grind	

### Prep Batch: 454800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-36638-1	STSB05_0-0.5	Total/NA	Solid	Fill_Geo-21	454242
160-36638-2	STSB05_0.5-3	Total/NA	Solid	Fill_Geo-21	454242
160-36638-3	STSB05_3-6	Total/NA	Solid	Fill_Geo-21	454242
160-36638-4	STSB05_6-15	Total/NA	Solid	Fill_Geo-21	454242
160-36638-5	STSB05_15-25	Total/NA	Solid	Fill_Geo-21	454242
160-36638-6	STSB05_25-35	Total/NA	Solid	Fill_Geo-21	454242

# QC Association Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## Rad (Continued)

### Prep Batch: 454800 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-36638-7	STSB05_35-45	Total/NA	Solid	Fill_Geo-21	454242
160-36638-8	STSB05_45-55	Total/NA	Solid	Fill_Geo-21	454242
160-36638-9	STSB05_66-71	Total/NA	Solid	Fill_Geo-21	454242
160-36638-10	STSB05-FD_35-45	Total/NA	Solid	Fill_Geo-21	454242
160-36638-11	STSB05_55-61	Total/NA	Solid	Fill_Geo-21	454242
160-36638-12	STSB05_76-81	Total/NA	Solid	Fill_Geo-21	454242
160-36638-13	STSB06_0-0.5	Total/NA	Solid	Fill_Geo-21	454242
160-36638-14	STSB06_0.5-3	Total/NA	Solid	Fill_Geo-21	454242
160-36638-15	STSB06_3-6	Total/NA	Solid	Fill_Geo-21	454242
160-36638-16	STSB06-FD_0.5-3	Total/NA	Solid	Fill_Geo-21	454242
160-36638-17	STSB06_6-15	Total/NA	Solid	Fill_Geo-21	454242
160-36638-18	STSB06_15-25	Total/NA	Solid	Fill_Geo-21	454242
160-36638-19	STSB06_25-35	Total/NA	Solid	Fill_Geo-21	454242
160-36638-20	STSB06_35-45	Total/NA	Solid	Fill_Geo-21	454242
MB 160-454800/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	454242
LCS 160-454800/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	454242
160-36638-20 DU	STSB06_35-45	Total/NA	Solid	Fill_Geo-21	454242

### Prep Batch: 454803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-36638-21	STSB06_45-51	Total/NA	Solid	Fill_Geo-21	454242
160-36638-22	STSB06_56-61	Total/NA	Solid	Fill_Geo-21	454242
160-36638-23	STSB06_66-71	Total/NA	Solid	Fill_Geo-21	454242
160-36638-24	STSB06-FD_15-25	Total/NA	Solid	Fill_Geo-21	454242
MB 160-454803/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	454242
LCS 160-454803/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	454434
160-36699-A-2-B DU	Duplicate	Total/NA	Solid	Fill_Geo-21	454434

# Lab Chronicle

Client: Wood E&I Solutions Inc  
 Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## **Client Sample ID: STSB05\_0-0.5**

Date Collected: 12/04/19 12:51

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-1**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456218	01/09/20 10:33	KLS	TAL SL

## **Client Sample ID: STSB05\_0-0.5**

Date Collected: 12/04/19 12:51

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-1**

Matrix: Solid

Percent Solids: 93.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 07:14	FLC	TAL SL

## **Client Sample ID: STSB05\_0.5-3**

Date Collected: 12/04/19 12:54

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-2**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456219	01/09/20 10:34	KLS	TAL SL

## **Client Sample ID: STSB05\_0.5-3**

Date Collected: 12/04/19 12:54

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-2**

Matrix: Solid

Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 07:21	FLC	TAL SL

## **Client Sample ID: STSB05\_3-6**

Date Collected: 12/04/19 13:11

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-3**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456214	01/09/20 10:31	KLS	TAL SL

Eurofins TestAmerica, St. Louis

# Lab Chronicle

Client: Wood E&I Solutions Inc  
 Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## **Client Sample ID: STSB05\_3-6**

Date Collected: 12/04/19 13:11  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-3**

Matrix: Solid

Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 07:27	FLC	TAL SL

## **Client Sample ID: STSB05\_6-15**

Date Collected: 12/04/19 14:00  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-4**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456213	01/09/20 10:32	KLS	TAL SL

## **Client Sample ID: STSB05\_6-15**

Date Collected: 12/04/19 14:00  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-4**

Matrix: Solid

Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 07:54	FLC	TAL SL

## **Client Sample ID: STSB05\_15-25**

Date Collected: 12/04/19 14:08  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-5**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456215	01/09/20 10:29	KLS	TAL SL

## **Client Sample ID: STSB05\_15-25**

Date Collected: 12/04/19 14:08  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-5**

Matrix: Solid

Percent Solids: 86.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 08:01	FLC	TAL SL

## **Client Sample ID: STSB05\_25-35**

Date Collected: 12/04/19 14:32  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-6**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL

Eurofins TestAmerica, St. Louis

# Lab Chronicle

Client: Wood E&I Solutions Inc  
 Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

**Client Sample ID: STSB05\_25-35**

Date Collected: 12/04/19 14:32

Date Received: 12/10/19 09:00

**Lab Sample ID: 160-36638-6**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456216	01/09/20 10:30	KLS	TAL SL

**Client Sample ID: STSB05\_25-35**

Date Collected: 12/04/19 14:32

Date Received: 12/10/19 09:00

**Lab Sample ID: 160-36638-6**

Matrix: Solid

Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 08:08	FLC	TAL SL

**Client Sample ID: STSB05\_35-45**

Date Collected: 12/04/19 14:43

Date Received: 12/10/19 09:00

**Lab Sample ID: 160-36638-7**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456214	01/09/20 11:10	KLS	TAL SL

**Client Sample ID: STSB05\_35-45**

Date Collected: 12/04/19 14:43

Date Received: 12/10/19 09:00

**Lab Sample ID: 160-36638-7**

Matrix: Solid

Percent Solids: 88.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 08:14	FLC	TAL SL

**Client Sample ID: STSB05\_45-55**

Date Collected: 12/04/19 15:10

Date Received: 12/10/19 09:00

**Lab Sample ID: 160-36638-8**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456213	01/09/20 11:11	KLS	TAL SL

Eurofins TestAmerica, St. Louis

# Lab Chronicle

Client: Wood E&I Solutions Inc  
 Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## **Client Sample ID: STSB05\_45-55**

Date Collected: 12/04/19 15:10

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-8**

Matrix: Solid

Percent Solids: 89.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 08:21	FLC	TAL SL

## **Client Sample ID: STSB05\_66-71**

Date Collected: 12/04/19 15:44

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-9**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456216	01/09/20 11:12	KLS	TAL SL

## **Client Sample ID: STSB05\_66-71**

Date Collected: 12/04/19 15:44

Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-9**

Matrix: Solid

Percent Solids: 87.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 08:28	FLC	TAL SL

## **Client Sample ID: STSB05-FD\_35-45**

## **Lab Sample ID: 160-36638-10**

Matrix: Solid

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456217	01/09/20 11:13	KLS	TAL SL

## **Client Sample ID: STSB05-FD\_35-45**

## **Lab Sample ID: 160-36638-10**

Matrix: Solid

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 08:35	FLC	TAL SL

## **Client Sample ID: STSB05\_55-61**

## **Lab Sample ID: 160-36638-11**

Matrix: Solid

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL

Eurofins TestAmerica, St. Louis

# Lab Chronicle

Client: Wood E&I Solutions Inc  
 Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

**Client Sample ID: STSB05\_55-61**

**Lab Sample ID: 160-36638-11**

Matrix: Solid

Date Collected: 12/04/19 15:30

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456218	01/09/20 11:14	KLS	TAL SL

**Client Sample ID: STSB05\_55-61**

**Lab Sample ID: 160-36638-11**

Matrix: Solid

Date Collected: 12/04/19 15:30

Date Received: 12/10/19 09:00

Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 08:41	FLC	TAL SL

**Client Sample ID: STSB05\_76-81**

**Lab Sample ID: 160-36638-12**

Matrix: Solid

Date Collected: 12/04/19 16:00

Date Received: 12/10/19 09:00

Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456219	01/09/20 11:15	KLS	TAL SL

**Client Sample ID: STSB05\_76-81**

**Lab Sample ID: 160-36638-12**

Matrix: Solid

Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 08:48	FLC	TAL SL

**Client Sample ID: STSB06\_0-0.5**

**Lab Sample ID: 160-36638-13**

Matrix: Solid

Date Collected: 12/05/19 10:54

Date Received: 12/10/19 09:00

Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456214	01/09/20 11:51	KLS	TAL SL

Eurofins TestAmerica, St. Louis

# Lab Chronicle

Client: Wood E&I Solutions Inc  
 Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## **Client Sample ID: STSB06\_0-0.5**

Date Collected: 12/05/19 10:54  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-13**

Matrix: Solid

Percent Solids: 93.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 08:55	FLC	TAL SL

## **Client Sample ID: STSB06\_0.5-3**

Date Collected: 12/05/19 10:57  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-14**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456213	01/09/20 11:51	KLS	TAL SL

## **Client Sample ID: STSB06\_0.5-3**

Date Collected: 12/05/19 10:57  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-14**

Matrix: Solid

Percent Solids: 96.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 09:22	FLC	TAL SL

## **Client Sample ID: STSB06\_3-6**

Date Collected: 12/05/19 11:10  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-15**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456216	01/09/20 11:52	KLS	TAL SL

## **Client Sample ID: STSB06\_3-6**

Date Collected: 12/05/19 11:10  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-15**

Matrix: Solid

Percent Solids: 95.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 09:29	FLC	TAL SL

## **Client Sample ID: STSB06-FD\_0.5-3**

Date Collected: 12/05/19 10:59  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-16**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL

Eurofins TestAmerica, St. Louis

# Lab Chronicle

Client: Wood E&I Solutions Inc  
 Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

**Client Sample ID: STSB06-FD\_0.5-3**

**Lab Sample ID: 160-36638-16**

Matrix: Solid

Date Collected: 12/05/19 10:59

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456217	01/09/20 11:53	KLS	TAL SL

**Client Sample ID: STSB06-FD\_0.5-3**

**Lab Sample ID: 160-36638-16**

Matrix: Solid

Date Collected: 12/05/19 10:59

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 09:35	FLC	TAL SL

**Client Sample ID: STSB06\_6-15**

**Lab Sample ID: 160-36638-17**

Matrix: Solid

Date Collected: 12/05/19 11:18

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453925	12/11/19 09:17	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456218	01/09/20 11:54	KLS	TAL SL

**Client Sample ID: STSB06\_6-15**

**Lab Sample ID: 160-36638-17**

Matrix: Solid

Date Collected: 12/05/19 11:18

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 09:42	FLC	TAL SL

**Client Sample ID: STSB06\_15-25**

**Lab Sample ID: 160-36638-18**

Matrix: Solid

Date Collected: 12/05/19 11:24

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453936	12/11/19 10:27	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456219	01/09/20 11:56	KLS	TAL SL

Eurofins TestAmerica, St. Louis

# Lab Chronicle

Client: Wood E&I Solutions Inc  
 Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## **Client Sample ID: STSB06\_15-25**

Date Collected: 12/05/19 11:24  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-18**

Matrix: Solid  
 Percent Solids: 95.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 09:49	FLC	TAL SL

## **Client Sample ID: STSB06\_25-35**

Date Collected: 12/05/19 11:33  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-19**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453936	12/11/19 10:27	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456214	01/09/20 12:32	KLS	TAL SL

## **Client Sample ID: STSB06\_25-35**

Date Collected: 12/05/19 11:33  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-19**

Matrix: Solid  
 Percent Solids: 94.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 09:56	FLC	TAL SL

## **Client Sample ID: STSB06\_35-45**

Date Collected: 12/05/19 11:53  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-20**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453936	12/11/19 10:27	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454800	12/19/19 17:53	KLH	TAL SL
Total/NA	Analysis	901.1		1	456213	01/09/20 12:32	KLS	TAL SL

## **Client Sample ID: STSB06\_35-45**

Date Collected: 12/05/19 11:53  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-20**

Matrix: Solid  
 Percent Solids: 93.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454089	12/12/19 12:37	LAM	TAL SL
Total/NA	Analysis	6020A		2	455780	01/01/20 10:02	FLC	TAL SL

## **Client Sample ID: STSB06\_45-51**

Date Collected: 12/05/19 12:22  
 Date Received: 12/10/19 09:00

## **Lab Sample ID: 160-36638-21**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453936	12/11/19 10:27	KRS	TAL SL

Eurofins TestAmerica, St. Louis

# Lab Chronicle

Client: Wood E&I Solutions Inc  
 Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

**Client Sample ID: STSB06\_45-51**

**Lab Sample ID: 160-36638-21**

Matrix: Solid

Date Collected: 12/05/19 12:22

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454803	12/19/19 19:25	KLH	TAL SL
Total/NA	Analysis	901.1		1	456218	01/09/20 06:39	KLS	TAL SL

**Client Sample ID: STSB06\_45-51**

**Lab Sample ID: 160-36638-21**

Matrix: Solid

Date Collected: 12/05/19 12:22

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454090	12/12/19 12:39	LAM	TAL SL
Total/NA	Analysis	6020A		2	455779	12/31/19 22:08	FLC	TAL SL

**Client Sample ID: STSB06\_56-61**

**Lab Sample ID: 160-36638-22**

Matrix: Solid

Date Collected: 12/05/19 12:34

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453936	12/11/19 10:27	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454803	12/19/19 19:25	KLH	TAL SL
Total/NA	Analysis	901.1		1	456219	01/09/20 06:40	KLS	TAL SL

**Client Sample ID: STSB06\_56-61**

**Lab Sample ID: 160-36638-22**

Matrix: Solid

Date Collected: 12/05/19 12:34

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454090	12/12/19 12:39	LAM	TAL SL
Total/NA	Analysis	6020A		2	455779	12/31/19 22:35	FLC	TAL SL

**Client Sample ID: STSB06\_66-71**

**Lab Sample ID: 160-36638-23**

Matrix: Solid

Date Collected: 12/05/19 12:52

Date Received: 12/10/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453936	12/11/19 10:27	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454803	12/19/19 19:25	KLH	TAL SL
Total/NA	Analysis	901.1		1	456213	01/09/20 06:41	KLS	TAL SL

Eurofins TestAmerica, St. Louis

# Lab Chronicle

Client: Wood E&I Solutions Inc  
Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

## Client Sample ID: STSB06\_66-71

Date Collected: 12/05/19 12:52

Date Received: 12/10/19 09:00

## Lab Sample ID: 160-36638-23

Matrix: Solid

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454090	12/12/19 12:39	LAM	TAL SL
Total/NA	Analysis	6020A		2	455779	12/31/19 23:02	FLC	TAL SL

## Client Sample ID: STSB06-FD\_15-25

Date Collected: 12/05/19 11:26

Date Received: 12/10/19 09:00

## Lab Sample ID: 160-36638-24

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	453936	12/11/19 10:27	KRS	TAL SL
Total/NA	Leach	Dry and Grind			454242	12/13/19 16:23	KRS	TAL SL
Total/NA	Prep	Fill_Geo-21			454803	12/19/19 19:25	KLH	TAL SL
Total/NA	Analysis	901.1		1	456218	01/09/20 07:18	KLS	TAL SL

## Client Sample ID: STSB06-FD\_15-25

Date Collected: 12/05/19 11:26

Date Received: 12/10/19 09:00

## Lab Sample ID: 160-36638-24

Matrix: Solid

Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454090	12/12/19 12:39	LAM	TAL SL
Total/NA	Analysis	6020A		2	455779	12/31/19 23:09	FLC	TAL SL

### Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: Wood E&I Solutions Inc

Job ID: 160-36638-1

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

## Laboratory: Eurofins TestAmerica, St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Louisiana	NELAP	04080	06-30-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
901.1	Fill_Geo-21	Solid	Radium-226
901.1	Fill_Geo-21	Solid	Radium-228
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Nevada State Program MO000542018-1 07-31-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6020A	3050B	Solid	Thorium
901.1	Fill_Geo-21	Solid	Radium-226
901.1	Fill_Geo-21	Solid	Radium-228
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

## Method Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL SL
Moisture	Percent Moisture	EPA	TAL SL
901.1	Radium-226 & Other Gamma Emitters (GS)	EPA	TAL SL
3050B	Preparation, Metals	SW846	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL

### Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - Yerington OU-4B\_OU-5\_SOIL

Job ID: 160-36638-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-36638-1	STSB05_0-0.5	Solid	12/04/19 12:51	12/10/19 09:00	
160-36638-2	STSB05_0.5-3	Solid	12/04/19 12:54	12/10/19 09:00	
160-36638-3	STSB05_3-6	Solid	12/04/19 13:11	12/10/19 09:00	
160-36638-4	STSB05_6-15	Solid	12/04/19 14:00	12/10/19 09:00	
160-36638-5	STSB05_15-25	Solid	12/04/19 14:08	12/10/19 09:00	
160-36638-6	STSB05_25-35	Solid	12/04/19 14:32	12/10/19 09:00	
160-36638-7	STSB05_35-45	Solid	12/04/19 14:43	12/10/19 09:00	
160-36638-8	STSB05_45-55	Solid	12/04/19 15:10	12/10/19 09:00	
160-36638-9	STSB05_66-71	Solid	12/04/19 15:44	12/10/19 09:00	
160-36638-10	STSB05-FD_35-45	Solid	12/04/19 14:45	12/10/19 09:00	
160-36638-11	STSB05_55-61	Solid	12/04/19 15:30	12/10/19 09:00	
160-36638-12	STSB05_76-81	Solid	12/04/19 16:00	12/10/19 09:00	
160-36638-13	STSB06_0-0.5	Solid	12/05/19 10:54	12/10/19 09:00	
160-36638-14	STSB06_0.5-3	Solid	12/05/19 10:57	12/10/19 09:00	
160-36638-15	STSB06_3-6	Solid	12/05/19 11:10	12/10/19 09:00	
160-36638-16	STSB06-FD_0.5-3	Solid	12/05/19 10:59	12/10/19 09:00	
160-36638-17	STSB06_6-15	Solid	12/05/19 11:18	12/10/19 09:00	
160-36638-18	STSB06_15-25	Solid	12/05/19 11:24	12/10/19 09:00	
160-36638-19	STSB06_25-35	Solid	12/05/19 11:33	12/10/19 09:00	
160-36638-20	STSB06_35-45	Solid	12/05/19 11:53	12/10/19 09:00	
160-36638-21	STSB06_45-51	Solid	12/05/19 12:22	12/10/19 09:00	
160-36638-22	STSB06_56-61	Solid	12/05/19 12:34	12/10/19 09:00	
160-36638-23	STSB06_66-71	Solid	12/05/19 12:52	12/10/19 09:00	
160-36638-24	STSB06-FD_15-25	Solid	12/05/19 11:26	12/10/19 09:00	

Eurofins TestAmerica, St. Louis

## Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Site Node Path: NV\_YERINGTON

BP/ARC Facility Name: Anaconda Copper Mine Site

Req Due Date (mm/dd/yy):

Lab Work Order Number:

Page 1 of 3

STD TAT \_\_\_\_\_

Rush TAT: Yes    No   

Lab No.	Sample Description	Date	Time	Soil / Solid Water / Liquid Air / Vapor	Total Number of Containers	HNO <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> Unpreserved	Requested Analyses		Report Type & QC Level	
							Matrix	No. Containers / Preservative	MS/MSD or LD	Comments
STSBO5_0-0.5	12/04/19 1251	X		2	2	X X X X				Report soil on dry weight basis.
STSBO5_0.5-3	12/04/19 1254	X		2	2	X X X X				
STSBO5_3-6	12/04/19 1311	X		2	2	X X X X				
STSBO5_6-15	12/04/19 1400	X		2	2	X X X X				
STSBO5_15-25	12/04/19 1408	X		2	2	X X X X				
STSBO5_25-35	12/04/19 1432	X		2	2	X X X X				
STSBO5_35-45	12/04/19 1443	X		2	2	X X X X				
STSBO5_45-55	12/04/19 1510	X		2	2	X X X X				
STSBO5_66-71	12/04/19 1544	X		2	2	X X X X				
STSBO5_FD_35-45	12/04/19 1445	X		2	2	X X X X				
Sampler's Name: Bryce Johnson		Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation		Date	Time	
Sampler's Company: Wood		<u>Bryce Johnson</u>		12/04/19	0930	<u>ETATL</u>		12/04/19	0930	
Shipment Method: FedEx		Ship Date: 12/04/19								
Shipment Tracking No: 777185745978, 6839										
Special Instructions:										

## Laboratory Management Program LaMP Chain of Custody Record

BPI/ARC Site Node Path: NV\_YERINGTON

BPI/ARC Facility Name: Anaconda Copper Mine Site

Req Due Date (mm/dd/yy):	STD TAT	Rush TAT: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Lab Work Order Number:		

Page 2 of 3	Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation	Date	Time
	Sampler's Name:	Signature					
Sampler's Company:	Wood		12/9/19	0930	J. E. T. A. S.	12/10/19	0700
Shipment Method:	Fed Ex	Ship Date:	12/9/19				
Shipment Tracking No:	7771 8574 5978, 6839						
Special Instructions:							
THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No	Temp Blank: Yes / No	Cooler Temp on Receipt: °F/C	Trip Blank: Yes / No	MS/MSD Sample Submitted: Yes / No	BP/ARC LaMP COC Rev. 7, Jul 29, 2010		



Atlantic Richfield Company  
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Site Node Path: NV\_YERINGTON

Req Due Date (mm/dd/yy):  
Lab Work Order Number:

Req Due Date (mm/dd/yy):  
Lab Work Order Number:

Page 37 of 55

me: Bryce Johnson

Relinquished By / Affiliation

Date      Time      Accepted By / Affiliation

Date Time

12-10-19 09:00

Wood

12/10/19 09:00

100

8.683

110

1

卷之三

106

Sample Submitted: Yes / No

Sample Submitted: Yes / No

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
**12**  
13  
14  
15

## Login Sample Receipt Checklist

Client: Wood E&I Solutions Inc

Job Number: 160-36638-1

**Login Number:** 36638

**List Source:** Eurofins TestAmerica, St. Louis

**List Number:** 1

**Creator:** McKinney, Gerrod E

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Internal Chain of Custody Tracking

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O	ICOC ID	ICOC Date
160-36638	1	STSB05_0-0.5	Solid	160-1848994	160-36638-A-1	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	1	STSB05_0-0.5	Solid	160-1848994	160-36638-A-1	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	1	STSB05_0-0.5	Solid	160-1848994	160-36638-A-1	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	1	STSB05_0-0.5	Solid	160-1848994	160-36638-A-1	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	1	STSB05_0-0.5	Solid	160-1848994	160-36638-A-1	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	1	STSB05_0-0.5	Solid	160-1848994	160-36638-A-1	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	1	STSB05_0-0.5	Solid	160-1848995	160-36638-B-1	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	2	STSB05_0.5-3	Solid	160-1848996	160-36638-A-2	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	2	STSB05_0.5-3	Solid	160-1848996	160-36638-A-2	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	2	STSB05_0.5-3	Solid	160-1848996	160-36638-A-2	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	2	STSB05_0.5-3	Solid	160-1848996	160-36638-A-2	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	2	STSB05_0.5-3	Solid	160-1848996	160-36638-A-2	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	2	STSB05_0.5-3	Solid	160-1848996	160-36638-A-2	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	2	STSB05_0.5-3	Solid	160-1848997	160-36638-B-2	Plastic Bag - 1000g	Rad Cart				
160-36638	3	STSB05_3-6	Solid	160-1848998	160-36638-A-3	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	3	STSB05_3-6	Solid	160-1848998	160-36638-A-3	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	3	STSB05_3-6	Solid	160-1848998	160-36638-A-3	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	3	STSB05_3-6	Solid	160-1848998	160-36638-A-3	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	3	STSB05_3-6	Solid	160-1848998	160-36638-A-3	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	3	STSB05_3-6	Solid	160-1848998	160-36638-A-3	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	3	STSB05_3-6	Solid	160-1848999	160-36638-B-3	Plastic Bag - 1000g	Rad Cart				
160-36638	4	STSB05_6-15	Solid	160-1849000	160-36638-A-4	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	4	STSB05_6-15	Solid	160-1849000	160-36638-A-4	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	4	STSB05_6-15	Solid	160-1849000	160-36638-A-4	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	4	STSB05_6-15	Solid	160-1849000	160-36638-A-4	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	4	STSB05_6-15	Solid	160-1849000	160-36638-A-4	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	4	STSB05_6-15	Solid	160-1849000	160-36638-A-4	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	4	STSB05_6-15	Solid	160-1849001	160-36638-B-4	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	5	STSB05_15-25	Solid	160-1849002	160-36638-A-5	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	5	STSB05_15-25	Solid	160-1849002	160-36638-A-5	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	5	STSB05_15-25	Solid	160-1849002	160-36638-A-5	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	5	STSB05_15-25	Solid	160-1849002	160-36638-A-5	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	5	STSB05_15-25	Solid	160-1849002	160-36638-A-5	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	5	STSB05_15-25	Solid	160-1849002	160-36638-A-5	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	5	STSB05_15-25	Solid	160-1849003	160-36638-B-5	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	6	STSB05_25-35	Solid	160-1849004	160-36638-A-6	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	6	STSB05_25-35	Solid	160-1849004	160-36638-A-6	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	6	STSB05_25-35	Solid	160-1849004	160-36638-A-6	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	6	STSB05_25-35	Solid	160-1849004	160-36638-A-6	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	6	STSB05_25-35	Solid	160-1849004	160-36638-A-6	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35

# Internal Chain of Custody Tracking

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O	ICOC ID	ICOC Date
160-36638	6	STSB05_25-35	Solid	160-1849004	160-36638-A-6	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	6	STSB05_25-35	Solid	160-1849005	160-36638-B-6	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	7	STSB05_35-45	Solid	160-1849006	160-36638-A-7	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	7	STSB05_35-45	Solid	160-1849006	160-36638-A-7	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	7	STSB05_35-45	Solid	160-1849006	160-36638-A-7	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	7	STSB05_35-45	Solid	160-1849006	160-36638-A-7	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	7	STSB05_35-45	Solid	160-1849006	160-36638-A-7	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	7	STSB05_35-45	Solid	160-1849006	160-36638-A-7	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	7	STSB05_35-45	Solid	160-1849007	160-36638-B-7	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	8	STSB05_45-55	Solid	160-1849008	160-36638-A-8	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	8	STSB05_45-55	Solid	160-1849008	160-36638-A-8	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	8	STSB05_45-55	Solid	160-1849008	160-36638-A-8	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	8	STSB05_45-55	Solid	160-1849008	160-36638-A-8	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	8	STSB05_45-55	Solid	160-1849008	160-36638-A-8	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	8	STSB05_45-55	Solid	160-1849008	160-36638-A-8	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	8	STSB05_45-55	Solid	160-1849009	160-36638-B-8	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	9	STSB05_66-71	Solid	160-1849010	160-36638-A-9	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	9	STSB05_66-71	Solid	160-1849010	160-36638-A-9	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	9	STSB05_66-71	Solid	160-1849010	160-36638-A-9	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	9	STSB05_66-71	Solid	160-1849010	160-36638-A-9	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	9	STSB05_66-71	Solid	160-1849010	160-36638-A-9	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	9	STSB05_66-71	Solid	160-1849010	160-36638-A-9	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	9	STSB05_66-71	Solid	160-1849011	160-36638-B-9	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	10	STSB05-FD_35-45	Solid	160-1849012	160-36638-A-10	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	10	STSB05-FD_35-45	Solid	160-1849012	160-36638-A-10	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	10	STSB05-FD_35-45	Solid	160-1849012	160-36638-A-10	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	10	STSB05-FD_35-45	Solid	160-1849012	160-36638-A-10	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	10	STSB05-FD_35-45	Solid	160-1849012	160-36638-A-10	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	10	STSB05-FD_35-45	Solid	160-1849012	160-36638-A-10	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	10	STSB05-FD_35-45	Solid	160-1849013	160-36638-B-10	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	11	STSB05_55-61	Solid	160-1849014	160-36638-A-11	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	11	STSB05_55-61	Solid	160-1849014	160-36638-A-11	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	11	STSB05_55-61	Solid	160-1849014	160-36638-A-11	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	11	STSB05_55-61	Solid	160-1849014	160-36638-A-11	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	11	STSB05_55-61	Solid	160-1849014	160-36638-A-11	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	11	STSB05_55-61	Solid	160-1849014	160-36638-A-11	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	11	STSB05_55-61	Solid	160-1849015	160-36638-B-11	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	12	STSB05_76-81	Solid	160-1849016	160-36638-A-12	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	12	STSB05_76-81	Solid	160-1849016	160-36638-A-12	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	12	STSB05_76-81	Solid	160-1849016	160-36638-A-12	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52

# Internal Chain of Custody Tracking

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O	ICOC ID	ICOC Date
160-36638	12	STSB05_76-81	Solid	160-1849016	160-36638-A-12	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	12	STSB05_76-81	Solid	160-1849016	160-36638-A-12	Soil jar 4oz	METALS	Mazariegos, Leonel	I	160-187906	12/12/19 12:35
160-36638	12	STSB05_76-81	Solid	160-1849016	160-36638-A-12	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	12	STSB05_76-81	Solid	160-1849017	160-36638-B-12	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	13	STSB06_0-0.5	Solid	160-1849018	160-36638-A-13	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	13	STSB06_0-0.5	Solid	160-1849018	160-36638-A-13	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	13	STSB06_0-0.5	Solid	160-1849018	160-36638-A-13	Soil jar 4oz	1-47	Mazariegos, Leonel	I	160-188126	12/17/19 10:52
160-36638	13	STSB06_0-0.5	Solid	160-1849018	160-36638-A-13	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187896	12/12/19 11:57
160-36638	13	STSB06_0-0.5	Solid	160-1849018	160-36638-A-13	Soil jar 4oz	METALS	Mazariegos, Leonel	I	160-187906	12/12/19 12:35
160-36638	13	STSB06_0-0.5	Solid	160-1849018	160-36638-A-13	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	13	STSB06_0-0.5	Solid	160-1849019	160-36638-B-13	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	14	STSB06_0.5-3	Solid	160-1849020	160-36638-A-14	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	14	STSB06_0.5-3	Solid	160-1849020	160-36638-A-14	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	14	STSB06_0.5-3	Solid	160-1849020	160-36638-A-14	Soil jar 4oz	1-47	Mazariegos, Leonel	I	160-188126	12/17/19 10:52
160-36638	14	STSB06_0.5-3	Solid	160-1849020	160-36638-A-14	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	14	STSB06_0.5-3	Solid	160-1849020	160-36638-A-14	Soil jar 4oz	METALS	Mazariegos, Leonel	I	160-187906	12/12/19 12:35
160-36638	14	STSB06_0.5-3	Solid	160-1849020	160-36638-A-14	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	14	STSB06_0.5-3	Solid	160-1849021	160-36638-B-14	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	15	STSB06_3-6	Solid	160-1849022	160-36638-A-15	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	15	STSB06_3-6	Solid	160-1849022	160-36638-A-15	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	15	STSB06_3-6	Solid	160-1849022	160-36638-A-15	Soil jar 4oz	1-47	Mazariegos, Leonel	I	160-188126	12/17/19 10:52
160-36638	15	STSB06_3-6	Solid	160-1849022	160-36638-A-15	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	15	STSB06_3-6	Solid	160-1849022	160-36638-A-15	Soil jar 4oz	METALS	Mazariegos, Leonel	I	160-187906	12/12/19 12:35
160-36638	15	STSB06_3-6	Solid	160-1849022	160-36638-A-15	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	15	STSB06_3-6	Solid	160-1849023	160-36638-B-15	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	16	STSB06-FD_0.5-3	Solid	160-1849024	160-36638-A-16	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	16	STSB06-FD_0.5-3	Solid	160-1849024	160-36638-A-16	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	16	STSB06-FD_0.5-3	Solid	160-1849024	160-36638-A-16	Soil jar 4oz	1-47	Mazariegos, Leonel	I	160-188126	12/17/19 10:52
160-36638	16	STSB06-FD_0.5-3	Solid	160-1849024	160-36638-A-16	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	16	STSB06-FD_0.5-3	Solid	160-1849024	160-36638-A-16	Soil jar 4oz	METALS	Mazariegos, Leonel	I	160-187906	12/12/19 12:35
160-36638	16	STSB06-FD_0.5-3	Solid	160-1849024	160-36638-A-16	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	16	STSB06-FD_0.5-3	Solid	160-1849025	160-36638-B-16	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	17	STSB06_6-15	Solid	160-1849026	160-36638-A-17	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404	12/19/19 20:11
160-36638	17	STSB06_6-15	Solid	160-1849026	160-36638-A-17	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	17	STSB06_6-15	Solid	160-1849026	160-36638-A-17	Soil jar 4oz	1-47	Mazariegos, Leonel	I	160-188126	12/17/19 10:52
160-36638	17	STSB06_6-15	Solid	160-1849026	160-36638-A-17	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	17	STSB06_6-15	Solid	160-1849026	160-36638-A-17	Soil jar 4oz	METALS	Mazariegos, Leonel	I	160-187906	12/12/19 12:35
160-36638	17	STSB06_6-15	Solid	160-1849026	160-36638-A-17	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	17	STSB06_6-15	Solid	160-1849027	160-36638-B-17	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	18	STSB06_15-25	Solid	160-1849028	160-36638-A-18	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21

# Internal Chain of Custody Tracking

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O ICOC ID	ICOC Date
160-36638	18	STSB06_15-25	Solid	160-1849028	160-36638-A-18	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404 12/19/19 20:11
160-36638	18	STSB06_15-25	Solid	160-1849028	160-36638-A-18	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126 12/17/19 10:52
160-36638	18	STSB06_15-25	Solid	160-1849028	160-36638-A-18	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894 12/12/19 11:56
160-36638	18	STSB06_15-25	Solid	160-1849028	160-36638-A-18	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906 12/12/19 12:35
160-36638	18	STSB06_15-25	Solid	160-1849028	160-36638-A-18	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787 12/11/19 02:57
160-36638	18	STSB06_15-25	Solid	160-1849029	160-36638-B-18	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003 12/13/19 16:20
160-36638	19	STSB06_25-35	Solid	160-1849030	160-36638-A-19	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396 12/19/19 17:21
160-36638	19	STSB06_25-35	Solid	160-1849030	160-36638-A-19	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404 12/19/19 20:11
160-36638	19	STSB06_25-35	Solid	160-1849030	160-36638-A-19	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126 12/17/19 10:52
160-36638	19	STSB06_25-35	Solid	160-1849030	160-36638-A-19	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894 12/12/19 11:56
160-36638	19	STSB06_25-35	Solid	160-1849030	160-36638-A-19	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906 12/12/19 12:35
160-36638	19	STSB06_25-35	Solid	160-1849030	160-36638-A-19	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787 12/11/19 02:57
160-36638	19	STSB06_25-35	Solid	160-1849031	160-36638-B-19	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003 12/13/19 16:20
160-36638	20	STSB06_35-45	Solid	160-1849032	160-36638-A-20	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396 12/19/19 17:21
160-36638	20	STSB06_35-45	Solid	160-1849032	160-36638-A-20	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188404 12/19/19 20:11
160-36638	20	STSB06_35-45	Solid	160-1849032	160-36638-A-20	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126 12/17/19 10:52
160-36638	20	STSB06_35-45	Solid	160-1849032	160-36638-A-20	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894 12/12/19 11:56
160-36638	20	STSB06_35-45	Solid	160-1849032	160-36638-A-20	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906 12/12/19 12:35
160-36638	20	STSB06_35-45	Solid	160-1849032	160-36638-A-20	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787 12/11/19 02:57
160-36638	20	STSB06_35-45	Solid	160-1849063	160-36638-A-20	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003 12/13/19 16:20
160-36638	20	STSB06_35-45	Solid	160-1849064	160-36638-A-20	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126 12/17/19 10:52
160-36638	20	STSB06_35-45	Solid	160-1849064	160-36638-A-20	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187895 12/12/19 11:56
160-36638	20	STSB06_35-45	Solid	160-1849064	160-36638-A-20	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906 12/12/19 12:35
160-36638	20	STSB06_35-45	Solid	160-1849064	160-36638-A-20	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787 12/11/19 02:57
160-36638	20	STSB06_35-45	Solid	160-1849065	160-36638-A-20	No Container	1-47	Mazariegos, Leonel I	I	160-188126 12/17/19 10:52
160-36638	20	STSB06_35-45	Solid	160-1849065	160-36638-A-20	No Container	1-47	Slama, Kurt R	I	160-187895 12/12/19 11:56
160-36638	20	STSB06_35-45	Solid	160-1849065	160-36638-A-20	No Container	METALS	Mazariegos, Leonel I	I	160-187906 12/12/19 12:35
160-36638	20	STSB06_35-45	Solid	160-1849033	160-36638-B-20	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003 12/13/19 16:20
160-36638	21	STSB06_45-51	Solid	160-1849034	160-36638-A-21	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396 12/19/19 17:21
160-36638	21	STSB06_45-51	Solid	160-1849034	160-36638-A-21	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188405 12/19/19 20:16
160-36638	21	STSB06_45-51	Solid	160-1849034	160-36638-A-21	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126 12/17/19 10:52
160-36638	21	STSB06_45-51	Solid	160-1849034	160-36638-A-21	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894 12/12/19 11:56
160-36638	21	STSB06_45-51	Solid	160-1849034	160-36638-A-21	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906 12/12/19 12:35
160-36638	21	STSB06_45-51	Solid	160-1849034	160-36638-A-21	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787 12/11/19 02:57
160-36638	21	STSB06_45-51	Solid	160-1849035	160-36638-B-21	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003 12/13/19 16:20
160-36638	22	STSB06_56-61	Solid	160-1849036	160-36638-A-22	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396 12/19/19 17:21
160-36638	22	STSB06_56-61	Solid	160-1849036	160-36638-A-22	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188405 12/19/19 20:16
160-36638	22	STSB06_56-61	Solid	160-1849036	160-36638-A-22	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126 12/17/19 10:52
160-36638	22	STSB06_56-61	Solid	160-1849036	160-36638-A-22	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894 12/12/19 11:56
160-36638	22	STSB06_56-61	Solid	160-1849036	160-36638-A-22	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906 12/12/19 12:35

# Internal Chain of Custody Tracking

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O	ICOC ID	ICOC Date
160-36638	22	STSB06_56-61	Solid	160-1849036	160-36638-A-22	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	22	STSB06_56-61	Solid	160-1849037	160-36638-B-22	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	23	STSB06_66-71	Solid	160-1849038	160-36638-A-23	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	23	STSB06_66-71	Solid	160-1849038	160-36638-A-23	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188405	12/19/19 20:16
160-36638	23	STSB06_66-71	Solid	160-1849038	160-36638-A-23	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	23	STSB06_66-71	Solid	160-1849038	160-36638-A-23	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	23	STSB06_66-71	Solid	160-1849038	160-36638-A-23	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	23	STSB06_66-71	Solid	160-1849038	160-36638-A-23	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	23	STSB06_66-71	Solid	160-1849039	160-36638-B-23	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20
160-36638	24	STSB06-FD_15-25	Solid	160-1849040	160-36638-A-24	Soil jar 4oz	Pre-Prep	Moore, Octavia R	I	160-188396	12/19/19 17:21
160-36638	24	STSB06-FD_15-25	Solid	160-1849040	160-36638-A-24	Soil jar 4oz	1-47	Harris, Kayla L	I	160-188405	12/19/19 20:16
160-36638	24	STSB06-FD_15-25	Solid	160-1849040	160-36638-A-24	Soil jar 4oz	1-47	Mazariegos, Leonel I	I	160-188126	12/17/19 10:52
160-36638	24	STSB06-FD_15-25	Solid	160-1849040	160-36638-A-24	Soil jar 4oz	1-47	Slama, Kurt R	I	160-187894	12/12/19 11:56
160-36638	24	STSB06-FD_15-25	Solid	160-1849040	160-36638-A-24	Soil jar 4oz	METALS	Mazariegos, Leonel I	I	160-187906	12/12/19 12:35
160-36638	24	STSB06-FD_15-25	Solid	160-1849040	160-36638-A-24	Soil jar 4oz	Pre-Prep	Small, Sean J	I	160-187787	12/11/19 02:57
160-36638	24	STSB06-FD_15-25	Solid	160-1849041	160-36638-B-24	Plastic Bag - 1000g	Pre-Prep	Slama, Kurt R	I	160-188003	12/13/19 16:20

## METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.:

Batch Number: 454089 Batch Start Date: 12/12/19 12:37 Batch Analyst: Mazariegos, Leonel A

Batch Method: 3050B Batch End Date: 12/13/19 13:01

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MPREP1-A 00004	MPREP1-B 00004	MPREP2 00022	PR_LCSSRM U 0001
MB 160-454089/1		3050B, 6020A		0.5120 g	50 mL				
LCS 160-454089/2		3050B, 6020A		0.5397 g	50 mL	0.25 mL	0.25 mL	0.25 mL	
LCSSRM 160-454089/3		3050B, 6020A		0.5268 g	50 mL				0.5268 g
160-36638-A-1	STSB05_0-0.5	3050B, 6020A	T	0.5444 g	50 mL				
160-36638-A-2	STSB05_0.5-3	3050B, 6020A	T	0.5534 g	50 mL				
160-36638-A-3	STSB05_3-6	3050B, 6020A	T	0.5892 g	50 mL				
160-36638-A-4	STSB05_6-15	3050B, 6020A	T	0.5224 g	50 mL				
160-36638-A-5	STSB05_15-25	3050B, 6020A	T	0.5427 g	50 mL				
160-36638-A-6	STSB05_25-35	3050B, 6020A	T	0.5831 g	50 mL				
160-36638-A-7	STSB05_35-45	3050B, 6020A	T	0.5161 g	50 mL				
160-36638-A-8	STSB05_45-55	3050B, 6020A	T	0.5132 g	50 mL				
160-36638-A-9	STSB05_66-71	3050B, 6020A	T	0.5598 g	50 mL				
160-36638-A-10	STSB05-FD_35-45	3050B, 6020A	T	0.5183 g	50 mL				
160-36638-A-11	STSB05_55-61	3050B, 6020A	T	0.5446 g	50 mL				
160-36638-A-12	STSB05_76-81	3050B, 6020A	T	0.5192 g	50 mL				
160-36638-A-13	STSB06_0-0.5	3050B, 6020A	T	0.5480 g	50 mL				
160-36638-A-14	STSB06_0.5-3	3050B, 6020A	T	0.5777 g	50 mL				
160-36638-A-15	STSB06_3-6	3050B, 6020A	T	0.5303 g	50 mL				
160-36638-A-16	STSB06-FD_0.5-3	3050B, 6020A	T	0.5159 g	50 mL				
160-36638-A-17	STSB06_6-15	3050B, 6020A	T	0.5727 g	50 mL				
160-36638-A-18	STSB06_15-25	3050B, 6020A	T	0.5691 g	50 mL				
160-36638-A-19	STSB06_25-35	3050B, 6020A	T	0.5657 g	50 mL				
160-36638-A-20	STSB06_35-45	3050B, 6020A	T	0.5479 g	50 mL				
160-36638-A-20 MS	STSB06_35-45	3050B, 6020A	T	0.5202 g	50 mL	0.25 mL	0.25 mL	0.25 mL	
160-36638-A-20 MSD	STSB06_35-45	3050B, 6020A	T	0.5300 g	50 mL	0.25 mL	0.25 mL	0.25 mL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

6020A

Page 1 of 2

## METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.: \_\_\_\_\_

Batch Number: 454089Batch Start Date: 12/12/19 12:37Batch Analyst: Mazariegos, Leonel ABatch Method: 3050BBatch End Date: 12/13/19 13:01

Batch Notes	
Balance ID	27150420
Blank Soil Lot Number	25438819
Temperature - Corrected - End	B4: 94.1 Degrees C
Temperature - Corrected - Start	D5: 93.2 Degrees C
Digestion End Time	12/13/2019 12:50
Digestion Start Time	12/13/2019 10:09
Digestion Unit ID	HOTBLOCK 1
Digestion Tube/Cup ID	344749-4653
Hydrogen Peroxide ID	1819373
Hydrochloric Acid ID	1843669
Nitric Acid ID	1843691, 1847195
Pipette/Syringe/Dispenser ID	MET-12
Analyst ID - Spike Analyst	LAM
Sufficient Volume for Batch QC	YES
Thermometer ID	160322347

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

6020A

Page 2 of 2

## METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.:

Batch Number: 454090 Batch Start Date: 12/12/19 12:39 Batch Analyst: Mazariegos, Leonel A

Batch Method: 3050B Batch End Date: 12/13/19 13:01

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MPREP1-A 00004	MPREP1-B 00004	MPREP2 00022	PR_LCSSRM U 0001
MB 160-454090/1		3050B, 6020A		0.5393 g	50 mL				
LCS 160-454090/2		3050B, 6020A		0.5183 g	50 mL	0.25 mL	0.25 mL	0.25 mL	
LCSSRM 160-454090/3		3050B, 6020A		0.5285 g	50 mL				0.5285 g
160-36638-A-21	STSB06_45-51	3050B, 6020A	T	0.5494 g	50 mL				
160-36638-A-21 MS	STSB06_45-51	3050B, 6020A	T	0.5352 g	50 mL	0.25 mL	0.25 mL	0.25 mL	
160-36638-A-21 MSD	STSB06_45-51	3050B, 6020A	T	0.5189 g	50 mL	0.25 mL	0.25 mL	0.25 mL	
160-36638-A-22	STSB06_56-61	3050B, 6020A	T	0.5423 g	50 mL				
160-36638-A-23	STSB06_66-71	3050B, 6020A	T	0.5449 g	50 mL				
160-36638-A-24	STSB06-FD_15-25	3050B, 6020A	T	0.5221 g	50 mL				

Batch Notes	
Balance ID	27150420
Blank Soil Lot Number	25438819
Temperature - Corrected - End	B4: 94.1 Degrees C
Temperature - Corrected - Start	D5: 93.2 Degrees C
Digestion End Time	12/12/2019 12:50
Digestion Start Time	12/13/2019 10:09
Digestion Unit ID	HOTBLOCK 1
Digestion Tube/Cup ID	344749-4653
Hydrogen Peroxide ID	1819373
Hydrochloric Acid ID	1843669
Nitric Acid ID	1843691, 1847195
Pipette/Syringe/Dispenser ID	MET-12
Analyst ID - Spike Analyst	LAM
Sufficient Volume for Batch QC	YES
Thermometer ID	160322347

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

6020A

Page 1 of 2

## METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.:

Batch Number: 454090Batch Start Date: 12/12/19 12:39Batch Analyst: Mazariegos, Leonel ABatch Method: 3050BBatch End Date: 12/13/19 13:01

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

6020A

Page 2 of 2

## GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.:

Batch Number: 453925

Batch Start Date: 12/11/19 09:17

Batch Analyst: Slama, Kurt R

Batch Method: Moisture

Batch End Date: 12/12/19 11:39

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry		
160-36636-A-1		Moisture	T	2	1.0111 g	16.2566 g	16.2283 g		
160-36636-A-1 DU		Moisture	T	3	1.0054 g	16.9784 g	16.9478 g		
160-36638-A-1	STSB05_0-0.5	Moisture	T	5	1.0100 g	16.1435 g	15.2135 g		
160-36638-A-2	STSB05_0.5-3	Moisture	T	6	1.0034 g	16.2234 g	15.5549 g		
160-36638-A-3	STSB05_3-6	Moisture	T	7	0.9980 g	16.6213 g	15.6264 g		
160-36638-A-4	STSB05_6-15	Moisture	T	8	1.0048 g	16.3876 g	15.5087 g		
160-36638-A-5	STSB05_15-25	Moisture	T	9	1.0129 g	16.7456 g	14.5610 g		
160-36638-A-6	STSB05_25-35	Moisture	T	10	1.0104 g	16.4735 g	13.5328 g		
160-36638-A-7	STSB05_35-45	Moisture	T	11	1.0176 g	16.1915 g	14.4998 g		
160-36638-A-8	STSB05_45-55	Moisture	T	12	1.0047 g	16.6009 g	14.9666 g		
160-36638-A-9	STSB05_66-71	Moisture	T	13	1.0188 g	16.4057 g	14.5443 g		
160-36638-A-10	STSB05-FD_35-45	Moisture	T	14	1.0083 g	16.9781 g	15.5099 g		
160-36638-A-11	STSB05_55-61	Moisture	T	15	1.0155 g	16.1736 g	13.5849 g		
160-36638-A-12	STSB05_76-81	Moisture	T	16	1.0116 g	16.3143 g	14.3608 g		
160-36638-A-13	STSB06_0-0.5	Moisture	T	17	1.0124 g	16.1862 g	15.1393 g		
160-36638-A-14	STSB06_0.5-3	Moisture	T	18	1.0113 g	16.7020 g	16.1055 g		
160-36638-A-15	STSB06_3-6	Moisture	T	19	1.0103 g	16.7350 g	16.0922 g		
160-36638-A-16	STSB06-FD_0.5-3	Moisture	T	20	1.0031 g	16.2982 g	15.7098 g		
160-36638-A-17	STSB06_6-15	Moisture	T	21	0.9984 g	16.2541 g	15.5022 g		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Moisture

Page 1 of 2

## GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.: \_\_\_\_\_

Batch Number: 453925Batch Start Date: 12/11/19 09:17Batch Analyst: Slama, Kurt RBatch Method: MoistureBatch End Date: 12/12/19 11:39

Batch Notes	
Balance ID	0034150065
Batch Comment	TRAY S-1
Date samples were placed in the oven	12/11/2019
Oven Temp In	104.1 Degrees C
Time samples were placed in the oven	10:39
Date samples were removed from oven	12/12/2019
Oven Temp Out	104 Degrees C
Time Samples were removed from oven	11:39
Oven ID	OC
Thermometer ID	A142186

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Moisture

Page 2 of 2

## GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.:

Batch Number: 453936

Batch Start Date: 12/11/19 10:27

Batch Analyst: Slama, Kurt R

Batch Method: Moisture

Batch End Date: 12/12/19 11:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry		
160-36638-A-18	STSB06_15-25	Moisture	T	1	0.9933 g	16.1148 g	15.4855 g		
160-36638-A-18 DU	STSB06_15-25	Moisture	T	2	1.0111 g	16.4004 g	15.7134 g		
160-36638-A-19	STSB06_25-35	Moisture	T	3	1.0052 g	16.5773 g	15.6450 g		
160-36638-A-20	STSB06_35-45	Moisture	T	4	1.0047 g	16.1847 g	15.1486 g		
160-36638-A-21	STSB06_45-51	Moisture	T	5	0.9976 g	16.1283 g	14.7857 g		
160-36638-A-22	STSB06_56-61	Moisture	T	6	1.0128 g	16.3031 g	15.0765 g		
160-36638-A-23	STSB06_66-71	Moisture	T	7	1.0109 g	16.4558 g	14.5568 g		
160-36638-A-24	STSB06-FD_15-25	Moisture	T	8	1.0022 g	16.2073 g	15.6010 g		

## Batch Notes

Balance ID	0034150065
Batch Comment	TRAY E-1
Date samples were placed in the oven	12/11/2019
Oven Temp In	104.1 Degrees C
Time samples were place in the oven	10:39
Date samples were removed from oven	12/12/2019
Oven Temp Out	104.1 Degrees C
Time Samples were removed from oven	11:47
Oven ID	OC
Thermometer ID	A142186

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Moisture

Page 1 of 1

## GAMMA SPECTROSCOPY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.:

Batch Number: 454800 Batch Start Date: 12/19/19 17:53 Batch Analyst: Harris, Kayla L

Batch Method: Fill\_Geo-21 Batch End Date: 12/19/19 19:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	TareWeight	GrossWeight	InitialAmount	IngDecDate1	IngDecDate3	Geometry
MB 160-454800/1		Fill_Geo-21, 901.1				291.18 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
LCS 160-454800/2		Fill_Geo-21, 901.1				341.9 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-1-A	STSB05_0-0.5	Fill_Geo-21, 901.1	T	46.8 g	411.7 g	364.9 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-2-A	STSB05_0.5-3	Fill_Geo-21, 901.1	T	46.9 g	476.3 g	429.4 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-3-A	STSB05_3-6	Fill_Geo-21, 901.1	T	46.6 g	474.7 g	428.1 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-4-A	STSB05_6-15	Fill_Geo-21, 901.1	T	46.2 g	439.7 g	393.5 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-5-A	STSB05_15-25	Fill_Geo-21, 901.1	T	46.5 g	324.0 g	277.5 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-6-A	STSB05_25-35	Fill_Geo-21, 901.1	T	46.6 g	346.4 g	299.8 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-7-A	STSB05_35-45	Fill_Geo-21, 901.1	T	46.7 g	322.8 g	276.1 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-8-A	STSB05_45-55	Fill_Geo-21, 901.1	T	46.5 g	358.6 g	312.1 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-9-A	STSB05_66-71	Fill_Geo-21, 901.1	T	46.3 g	344.9 g	298.6 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-10-A	STSB05-FD_35-45	Fill_Geo-21, 901.1	T	46.5 g	360.6 g	314.1 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-11-A	STSB05_55-61	Fill_Geo-21, 901.1	T	46.5 g	270.2 g	223.7 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-12-A	STSB05_76-81	Fill_Geo-21, 901.1	T	46.8 g	374.2 g	327.4 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-13-A	STSB06_0-0.5	Fill_Geo-21, 901.1	T	49.9 g	451.3 g	401.4 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-14-A	STSB06_0.5-3	Fill_Geo-21, 901.1	T	46.5 g	386.6 g	340.1 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-15-A	STSB06_3-6	Fill_Geo-21, 901.1	T	46.6 g	415.2 g	368.6 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-16-A	STSB06-FD_0.5-3	Fill_Geo-21, 901.1	T	46.8 g	378.8 g	332 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-17-A	STSB06_6-15	Fill_Geo-21, 901.1	T	46.8 g	407.0 g	360.2 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-18-A	STSB06_15-25	Fill_Geo-21, 901.1	T	46.8 g	397.8 g	351 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-B-19-A	STSB06_25-35	Fill_Geo-21, 901.1	T	46.6 g	401.7 g	355.1 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

901.1

Page 1 of 3

## GAMMA SPECTROSCOPY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.:

Batch Number: 454800 Batch Start Date: 12/19/19 17:53 Batch Analyst: Harris, Kayla L

Batch Method: Fill\_Geo-21 Batch End Date: 12/19/19 19:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	TareWeight	GrossWeight	InitialAmount	IngDecDate1	IngDecDate3	Geometry
160-36638-B-20-A	STSB06_35-45	Fill_Geo-21, 901.1	T	46.7 g	393.3 g	346.6 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN
160-36638-A-20-D DU	STSB06_35-45	Fill_Geo-21, 901.1	T	46.7 g	393.3 g	346.6000 g	12/19/2019 19:00	01/09/2019 19:00	TUNA CAN

Lab Sample ID	Client Sample ID	Method Chain	Basis	Tuna Can LCS 00009					
MB 160-454800/1		Fill_Geo-21, 901.1							
LCS 160-454800/2		Fill_Geo-21, 901.1		# g					
160-36638-B-1-A	STSB05_0-0.5	Fill_Geo-21, 901.1	T						
160-36638-B-2-A	STSB05_0.5-3	Fill_Geo-21, 901.1	T						
160-36638-B-3-A	STSB05_3-6	Fill_Geo-21, 901.1	T						
160-36638-B-4-A	STSB05_6-15	Fill_Geo-21, 901.1	T						
160-36638-B-5-A	STSB05_15-25	Fill_Geo-21, 901.1	T						
160-36638-B-6-A	STSB05_25-35	Fill_Geo-21, 901.1	T						
160-36638-B-7-A	STSB05_35-45	Fill_Geo-21, 901.1	T						
160-36638-B-8-A	STSB05_45-55	Fill_Geo-21, 901.1	T						
160-36638-B-9-A	STSB05_66-71	Fill_Geo-21, 901.1	T						
160-36638-B-10-A	STSB05-FD_35-45	Fill_Geo-21, 901.1	T						
160-36638-B-11-A	STSB05_55-61	Fill_Geo-21, 901.1	T						
160-36638-B-12-A	STSB05_76-81	Fill_Geo-21, 901.1	T						
160-36638-B-13-A	STSB06_0-0.5	Fill_Geo-21, 901.1	T						
160-36638-B-14-A	STSB06_0.5-3	Fill_Geo-21, 901.1	T						
160-36638-B-15-A	STSB06_3-6	Fill_Geo-21, 901.1	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

901.1

Page 2 of 3

## GAMMA SPECTROSCOPY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.:

Batch Number: 454800 Batch Start Date: 12/19/19 17:53 Batch Analyst: Harris, Kayla L

Batch Method: Fill\_Geo-21 Batch End Date: 12/19/19 19:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	Tuna Can LCS 00009					
160-36638-B-16-A	STSB06-FD_0.5-3	Fill_Geo-21, 901.1	T						
160-36638-B-17-A	STSB06_6-15	Fill_Geo-21, 901.1	T						
160-36638-B-18-A	STSB06_15-25	Fill_Geo-21, 901.1	T						
160-36638-B-19-A	STSB06_25-35	Fill_Geo-21, 901.1	T						
160-36638-B-20-A	STSB06_35-45	Fill_Geo-21, 901.1	T						
160-36638-A-20-D DU	STSB06_35-45	Fill_Geo-21, 901.1	T						

## Batch Notes

Balance ID	1121432711
SOP Number	ST-RC-0025

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

901.1

Page 3 of 3

## GAMMA SPECTROSCOPY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.:

Batch Number: 454803

Batch Start Date: 12/19/19 19:25

Batch Analyst: Harris, Kayla L

Batch Method: Fill\_Geo-21

Batch End Date: 12/19/19 20:07

Lab Sample ID	Client Sample ID	Method Chain	Basis	TareWeight	GrossWeight	InitialAmount	IngDecDate1	IngDecDate3	Geometry
MB 160-454803/1		Fill_Geo-21, 901.1				291.18 g	12/19/2019 20:05	01/09/2020 20:05	TUNA CAN
LCS 160-454803/2		Fill_Geo-21, 901.1				341.9 g	12/19/2019 20:05	01/09/2020 20:05	TUNA CAN
160-36638-B-21-A	STSB06_45-51	Fill_Geo-21, 901.1	T	46.6 g	381.4 g	334.8 g	12/19/2019 20:05	01/09/2020 20:05	TUNA CAN
160-36638-B-22-A	STSB06_56-61	Fill_Geo-21, 901.1	T	46.0 g	351.4 g	305.4 g	12/19/2019 20:05	01/09/2020 20:05	TUNA CAN
160-36638-B-23-A	STSB06_66-71	Fill_Geo-21, 901.1	T	46.8 g	422.1 g	375.3 g	12/19/2019 20:05	01/09/2020 20:05	TUNA CAN
160-36638-B-24-A	STSB06-FD_15-25	Fill_Geo-21, 901.1	T	46.7 g	374.3 g	327.6 g	12/19/2019 20:05	01/09/2020 20:05	TUNA CAN
160-36699-B-2-A		Fill_Geo-21, 901.1	T	46.6 g	463.4 g	416.8 g	12/19/2019 20:05	01/09/2020 20:05	TUNA CAN
160-36699-A-2-A DU		Fill_Geo-21, 901.1	T	46.6 g	463.4 g	416.8 g	12/19/2019 20:05	01/09/2020 20:05	TUNA CAN

Lab Sample ID	Client Sample ID	Method Chain	Basis	Tuna Can LCS 00009					
MB 160-454803/1		Fill_Geo-21, 901.1							
LCS 160-454803/2		Fill_Geo-21, 901.1		# g					
160-36638-B-21-A	STSB06_45-51	Fill_Geo-21, 901.1	T						
160-36638-B-22-A	STSB06_56-61	Fill_Geo-21, 901.1	T						
160-36638-B-23-A	STSB06_66-71	Fill_Geo-21, 901.1	T						
160-36638-B-24-A	STSB06-FD_15-25	Fill_Geo-21, 901.1	T						
160-36699-B-2-A		Fill_Geo-21, 901.1	T						
160-36699-A-2-A DU		Fill_Geo-21, 901.1	T						

## Batch Notes

Balance ID	1121432711
SOP Number	ST-RC-0025

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

901.1

Page 1 of 2

## GAMMA SPECTROSCOPY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, St. Louis Job No.: 160-36638-1

SDG No.:

Batch Number: 454803Batch Start Date: 12/19/19 19:25Batch Analyst: Harris, Kayla LBatch Method: Fill\_Geo-21Batch End Date: 12/19/19 20:07

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.